

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
3 February 2005 (03.02.2005)

PCT

(10) International Publication Number  
**WO 2005/011087 A1**

(51) International Patent Classification<sup>7</sup>: **H02K 5/128**

(21) International Application Number:  
PCT/CA2004/001407

(22) International Filing Date: 26 July 2004 (26.07.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
60/489,606 24 July 2003 (24.07.2003) US

(71) Applicant (for all designated States except US): **TESMA INTERNATIONAL INC.** [CA/CA]; 1000 Tesma Way, Concord, Ontario L4K 5R8 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **LACROIX, Michael, C.** [CA/CA]; 131 Bell Avenue, Hamilton, Ontario L8K 3E5 (CA). **BAJLON, Dean** [CA/CA]; 55 Erskin Avenue, Apt. 1112, Toronto, Ontario M4P 1y7 (CA). **CLOUGH, Malcolm, J.** [GB/CA]; 30 Harrison Garden Blvd., Toronto, Ontario M2N 7A9 (CA).

(74) Agents: **IMAI, Jeffrey, T.** et al.; Magna International Inc., 337 Magna Drive, Aurora, Ontario L4G 7K1 (CA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

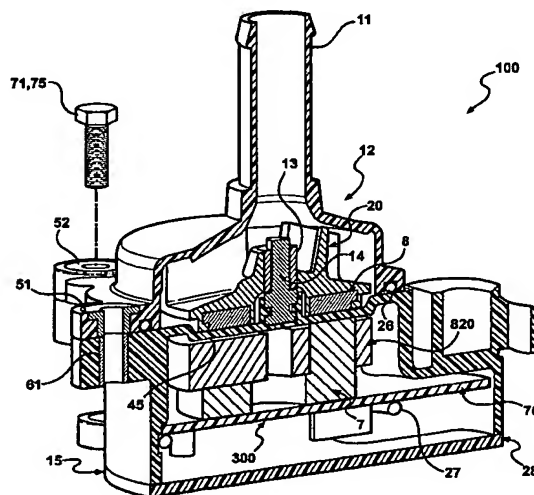
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

(54) Title: **ELECTRIC FLUID PUMP**



(57) Abstract: An electric fluid pump includes an upper housing having a fluid inlet and outlet. An impeller is seated within the upper housing for pumping fluid between the inlet and the outlet. The impeller includes at least one magnet secured thereto. A lower housing mates with the upper housing. The lower housing has an upper wall for closing the upper housing and a shaft extending from the upper wall for rotatably supporting the impeller. A stator is seated within the lower housing and spaced from the impeller by the upper wall. The stator includes a plurality of pillars supporting a winding of coils for producing a magnetic field to energize the magnet and rotate the impeller, and a plurality of top plates covering each of the coils and spaced apart by a predetermined gap for maintaining the magnetic field between the stator and the impeller. An end cap closes the stator within the lower housing.



---

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*